Final Submittal

(Blue Paper)

1. Administrative Questions/JPMs
2. In-plant JPMs
3. Control Room JPMs (simulator JPMs)

VIRGIL C. SUMMER NUCLEAR STATION - EXAM 2002-301

50-395
SEPTEMBER 9 - 17, 2002

Facility: ___Summer_____		Date of Examination: __9/9-13/02___
Examination Level (circle one): RO / **SRO**		Operating Test Number: ___1_____
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations	Review of License Operator Status Report to determine current active licenses. (Shift Turnover)
	Conduct of Operations	Determine adequate shift manning
A.2	Equipment Control	Evaluation of Surveillance Test results
A.3	Radiation Control	Determine personnel exposure limit for non-essential personnel
A.4	Emergency Plan	Classify an Emergency Plan Event

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM **Admin A.1.a**

REVIEW OF LICENSED OPERATOR STATUS REPORT TO DETERMINE CURRENT ACTIVE LICENSES

APPROVAL: ***APPROVAL DATE:***

REV NO: 0

CANDIDATE

EXAMINER:

SRO ONLY

THIS JPM IS APPROVED

TASK:

341-001-03-03 CONDUCT SHIFT AND RELIEF TURNOVER

TASK STANDARD:

Determine that not all the oncoming licensed operators have current active licenses.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

CLASSROOM PERFORM

REFERENCES:

TOOLS: SAP-200, Conduct of Operations, Attachment I
Watchstanding Authorization Report, (License Operators Status Report)
C Shift September Schedule

:

EVALUATION TIME 10 ***TIME CRITICAL*** NO ***10CFR55:*** 41b10

CANDIDATE:

TIME START:

TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS: None

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: Normal plant operations
Shift turnover is being conducted

INITIATING CUES: As the oncoming Shift Supervisor, perform step 2.c of Attachment 1, of SAP-200, Conduct of Operations.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
Yes	Yes	Perform SAP-200, Attachment I, Step 2.c.	Review the Licensed Operator Status Report and determine that not all oncoming licensed operators have current licenses. G. Ervin has called in sick, and the only available replacement licensed operators on-shift are B. Stroup (ABLL) and Bill Davis (rover), both of whom failed the most recent requalification exam and are currently inactive. Examinee should determine that a callout is required for G. Ervin.

CUES:

SAT

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: Admin A.1.a

DESCRIPTION: REVIEW OF LICENSED OPERATOR STATUS REPORT TO DETERMINE CURRENT ACTIVE LICENSES

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM **Admin A.1.b**

DETERMINE ADEQUATE SHIFT MANNING

APPROVAL: ***APPROVAL DATE:***

REV NO: 0

CANDIDATE

EXAMINER:

SRO ONLY

THIS JPM IS APPROVED

TASK:

TASK STANDARD:

Complete review of the FEP manning sheet and identify that additional staffing is needed.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

CLASSROOM PERFORM

REFERENCES:

TOOLS: SAP-200, Conduct of Operations, Attachment I
C Shift September Schedule
: FEP Manning Sheet
OPS Training Matrix

EVALUATION TIME 10 ***TIME CRITICAL*** NO ***10CFR55:*** 41b10

CANDIDATE:

TIME START:

TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS: None

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: Normal plant operations
Shift turnover is being conducted
The Shift Test Specialist presents the FEP manning sheet to the Shift Supervisor and requests assistance determining if staffing is adequate.

INITIATING CUES: As the oncoming Shift Supervisor, review the FEP manning sheet as required by SAP-200.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
Yes	No	Review the FEP Manning Sheet to determine shift manning.	Review FEP Manning Sheet and determine that additional staffing is needed. The student must determine that the ~~only available option would be to move the rover (Bill Davis) to the B NRO (CB Operator watch)~~ Bill Davis or B. Boyd can be used to provide a qualified fire brigade leader.

CUES:

SAT

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: Admin A.1.b

DESCRIPTION: DETERMINE ADEQUATE SHIFT MANNING

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM **Admin A.2**

EVALUATION OF SURVEILLANCE TEST RESULTS

APPROVAL: ***APPROVAL DATE:***

REV NO: 0

CANDIDATE

EXAMINER:

SRO ONLY

THIS JPM IS APPROVED

TASK:

342-026-03-02 REVIEW RESULTS OF SURVEILLANCE TESTS

TASK STANDARD:

:

Correctly determine that STP 205.004 does not pass the acceptance criteria.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

CLASSROOM SIMULATE

REFERENCES:

TOOLS: STP 205.004 and attached data sheets.
: STTS

EVALUATION TIME 15 ***TIME CRITICAL*** NO ***10CFR55:*** 41b8

CANDIDATE: TIME START:
TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:
QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS: None

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: TS required surveillance has been completed on "B" RHR pump.

INITIATING CUES: You are the Control Room Supervisor and STP 205.004, RHR PUMP AND VALVE OPERABILITY TEST, has been completed and given to you for review. Determine if STP 205.004 meets the acceptance criteria..

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
Yes	Yes	Review STP-205.004 Test Data.	Determine that the Test Data does not meet the acceptance criteria of STP-205.004. Stroke time for MVG 8809B exceeds maximum allowed stroke time, which requires the valve to be declared inoperable per the acceptance criteria of STP 205.004. Return as forund valve lineup has MVG 8706B restored to the incorrect position. The applicant recognize that the Surveillance Test Task Sheet STTS No. (0211867) did not match the STTS No. on the STP-205.004 data sheets (0211197).

CUES:

SAT

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: Admin A.2

DESCRIPTION: EVALUATION OF SURVEILLANCE TEST RESULTS

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM **Admin A.3**

DETERMINE PERSONNEL EXPOSURE LIMIT FOR PERSONNEL

APPROVAL: ***APPROVAL DATE:***

REV NO:

CANDIDATE

EXAMINER:

SRO ONLY

THIS JPM IS APPROVED

TASK:

TASK STANDARD:

The examinee correctly determines the exposure limit (same limitations as if not in a SAE).

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

CLASSROOM PERFORM

REFERENCES:

TOOLS: Personnel exposure record
HPP-153
: EPP 20
EPP 1.3

EVALUATION TIME 15 ***TIME CRITICAL*** NO ***10CFR55:*** 43b4

CANDIDATE: TIME START:
TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:
QUESTION GRADE: PERFORMANCE

EXAMINER:
SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS: None.

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: The site is in a SAE due to an inability to establish any feedwater flow to any SG's (LOCA greater than charging pump capacity with bleed and feed initiated) and the actions of EOP 15.0 are currently in progress. The OSC is in the process of being manned, but all building operators have not been released to the OSC by the Shift Supervisor at this time. An auxiliary operator from the operating shift is assisting with emergency duties. He has worked at V.C. Summer for only 3 months and is interim qualified IB. He previously worked at another nuclear plant for the first 6 months of the year (two quarters) and his exposure records have not been obtained from his previous employer. HP has indicated that his NRC Form 4 cannot be completed and verified until that information has been obtained. His current exposure record at V.C. Summer is attached.

INITIATING CUES: The OSC Supervisor has requested that the Shift Supervisor, as IED, authorize a verbal extension for the new operator to the federal exposure limit as a planned dose using the limit specified in EPP 20, Attachment III for all activities. Given the plant is in a SAE and the personnel exposure history of the operator, determine the exposure limit for the operator and if an extension is permissible..

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
~~No~~	No	A. Determine if the normal Admin limits can be	Step 3.2.1 of EPP-020 allows the IED/ED
Yes		waived by EPP-020.	to waive the normal administrative limits.
~~Yes~~	~~No~~	~~B. Determine limits for TEDE, TODE, LDE, SDE (WB), and SDE (ME).~~	~~Correctly calculate exposure limit for personnal. The examinee should determine that the missing exposure records for the first six months of the year require a reduction in the annual limits by 25% per quarter per HPP-153, step 4.4. The examinee should also determine that an extension is required since the operator has already received 1000 mrem TEDE per HPP-153, step 4.7. The limits are as follows per HPP-153: TEDE (step 4.3.2) 4000 mrem per current year x 50% = 2000 mrem - 1000 mrem already received = 1000 mrem. TODE (step 4.3.3) 40,000 mrem per current year x 50% = 20,000 mrem - 200 mrem already received = 19,800 mrem. LDE (step 4.3.4) 12,000 mrem per current year x 50% = 6,000 mrem - 0 mrem = 6,000 mrem. SDE, WB (step 4.3.5) 40,000 mrem per current year x 50% = 20,000 mrem - 0 mrem = 20,000 mrem. SDE, ME (step 4.3.6) 40,000 mrem per current year x 50% = 20,000 mrem - 0 mrem = 20,000 mrem. An exposure extension cannot be authorized per HPP-153, step 4.9, since the current year occupational exposure is not documented on an NRC Form 4 and has not therefore been signed by the effected individual to confirm the reported values are correct.~~

Post Exam Note: This JPM was modified by the facility between NRC approval and the JPM administration. The modification was not discussed with the NRC until just before it was to be administered. This change resulted in the need to revise the critical step and expected action and eliminate the requirement to calculate any limits. The final expected action follows:

Identify that Health Physics Procedure HPP-153, Administrative Exposure Limits, is superceded by Emergency Plan Procedure EPP-020, Emergency Personnel Exposure Control, in an emergency. Correctly determine that a verbal extension to an individual's administrative exposure limits can be suspended or modified verbally by the IED, Interim Emergency Director, per Section 3.2 of EPP-020.

SAT ***UNSAT***

Approved cue

The student may not calculate the exposure limit based on the fact that an extension is not permissible per HPP-153. If the examinee correctly determines that no extension can be granted, Ask them to determine the maximum exposure limit that could be requested for the operators extension when the request was made per HPP-153.

Modified cue the day of the exam

The student may not calculate the exposure limit based on the fact that an extension is not permissible per HPP-153. If the examinee correctly determines that no extension can be granted, ask them to determine the maximum exposure that could be received by the operator based on exposure histrory (ie remaining exposure). The student may also correctly determine that the normal admin limits may be waived by the IED per step 3.2.1 of EPP-020. If the student makes this determination, point out that step 4.2.2 requires a return to normal exposure control per HPP-153 when conditions allow, and that conditions are such that these limits should be utilized.

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

REFERENCE ALLOWED

QUESTION

ANSWER

CANDIDATE'S RESPONSE:

TIME:

REFERENCES:

JPM NO: Admin A.3

DESCRIPTION: DETERMINE PERSONNEL EXPOSURE LIMIT FOR PERSONNEL

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM **Admin A.4**

CLASSIFY EMERGENCY PLAN EVENT

APPROVAL: ***APPROVAL DATE:***

REV NO: 0

CANDIDATE

EXAMINER:

SRO ONLY

THIS JPM IS APPROVED

TASK:

344-019-03-02 CLASSIFY EMERGENCY EVENTS REQUIRING EMERGENCY PLAN IMPLEMENTATION

TASK STANDARD:

Emergency classification evaluated as an ALERT based on one of the following;

281 ONGOING SEVERE SECURITY THREAT
292 MANMADE PHENOMENON

:

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

SIMULATOR PERFORM

REFERENCES:

TOOLS: EPP-001

EVALUATION TIME 10 ***TIME CRITICAL*** No ***10CFR55:*** 45(a)11

CANDIDATE: TIME START:
TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:
QUESTION GRADE: PERFORMANCE

EXAMINER:
SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS: None

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: Severe weather warnings for the site.
The plant was at 100% power prior to the event.
An armed intrusion is in progress.
The RWST has been destroyed by an explosion.

INITIATING CUES: Classify the event per EPP-001 and indicate the basis for the classification.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
Yes	No	Evaluates plant conditions and classifies and Provides the basis for each event PER EPP-001	Determines ALERT Emergency Action Level based on 281 ~~or~~ AND 292.

281 – Alert, Security safeguards contingency event which results in adversaries commandeering an area of the plant, but not impacting shutdown capability.

292 – Alert, Known explosion at facility resulting in major damage to plant structures or equipment. For onsite explosion: Observation of damage by explosion.

CUES:

SAT

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: Admin A.4

DESCRIPTION: CLASSIFY EMERGENCY PLAN EVENT

IC SET:

INSTRUCTIONS:

COMMENTS:

System / JPM Title	Type Code*	Safety Function
a. Transfer to Cold Leg Reciriculation JPS-5	DS	3
b. **Loss of Intermediate Range Instrumentation JPS-029**	LDS	7
c. Stuck Rod JPS-043	DS	1
d. Identify and isolate RCS leak to CCWS JPS-042	DS	8
e. **Response to imminent pressurized thermal shock JPS-93**	NS	4P
f. Manually initiate Reactor Building Spray JPSF-019	AS	5
g. Transfer in-service charging pump (NRC) JPSF-046	DAS	2
a. **Locally start an Emergency D/G during a loss of offsite power (with Failure of field to flash) JPPF-012**	DA	6
b. **Control Room evacuation (duties of BOP operator) (Modified JPPF-049)**	M	8
c. **Establish Demineralizer Water Alternate cooling to Charging Pumps (Failure of Chilled Water Supply) (New JPPF-NRC)**	DAR	1

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM NO **JPS-005**

TRANSFER TO COLD LEG RECIRCULATION

APPROVAL: DOW ***APPROVAL DATE:*** 6/20/2002

REV NO: 9

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

000-136-05-01 TRANSFER RHR FROM COLD LEG INJECTION TO COLD LEG RECIRCULATION

TASK STANDARD:

ECCS is shifted from Cold Leg Injection to Cold Leg Recirculation without losing suction to the RHR, RB Spray, or Charging pumps or dead-heading a charging pump. Trains are split to remove vulnerability to passive failure.Train "A" is aligned for Hot Leg Recirc.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

SIMULATOR PERFORM

REFERENCES: EOP-2.2

:

TOOLS:

EVALUATION TIME 20 ***TIME CRITICAL*** NO ***10CFR55:*** 45(a)7

CANDIDATE:

TIME START:

TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: The plant has tripped and Safety Injected from 100% due to a DBA LOCA. CCW was shifted to fast speed in the active loop in preparation for cold leg recirculation. RWST level has decreased to 18% and containment sump level has increased above 413'. "C" Charging pump was OOS prior to the event. EOP-2.2 has been entered from EOP-2.0, LOSS OF SECONDARY COOLANT.

INITIATING CUES: RWST LO-LO-LVL-XFER TO SUMP annunciator is received at 18% RWST level. CRS has directed the NROATC to transfer ECCS to Cold Leg Recirculation and prepare for Hot Leg Recirculation per EOP-2.2 starting at STEP 3.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
Yes	Yes	Implement Attachment I, RHR/SPRAY SWAPOVER. Depress both RESET TRAIN A(B) RB SPRAY.	Implements Attachment I by depressing both RESET TRAIN A(B) RB SPRAY pushbuttons.

CUES:

SAT

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 2	***STEP STANDARD:***
No	Yes	Verify annunciator XCP-612 3-2 (RB SPR ACT) clears.	Verifies annunciator XCP-612 3-2 (RB SPR ACT) clears.

CUES:

SAT

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 3	***STEP STANDARD:***
Yes	Yes	Align RHR to the Sumps. (Closes RWST suction valves after verifying sump valves open.	Verifies MVG-8811A and 8812A, RHR SUMP A TO RHR PP A, indicates red light ON, green light OFF. MVG-8809A, RWST TO RHR PP A indicates red light OFF, green light ON. MVG-8811B and 8812B, RHR SUMP B TO RHR PP B, indicates red light ON, green light OFF. MVG-8809B, RWST TO RHR PP B indicates red light OFF, green light ON.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 4	STEP STANDARD:
Yes	Yes	Align RB Spray to the Sumps. (Closes RWST suction valves after verifying sump valves open.	Verifies MVG-3004A and 3005A, SUMP ISOL LOOP A, indicates red light ON, green light OFF. MVG-3001A, RWST TO SPRAY PUMP A SUCT indicates red light OFF, green light ON. MVG-3004B and 3005B, SUMP ISOL LOOP B, indicates red light ON, green light OFF. MVG-3001B, RWST TO SPRAY PUMP SUCT, indicates red light off, green light on.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 5	STEP STANDARD:
Yes	Yes	Verify at least one train of RHR has been aligned to the RHR sumps.	Verifies RB SUMP TO RHR PUMP valves MVG-8811A&B and MVG-8812A&B open. Verifies RWST TO RHR PUMP, MVG-8809A&B are closed.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 6	STEP STANDARD:
Yes	Yes	Reset both SI Reset Train "A" and Train "B".	SI RESET TRAIN A&B switches momentarily taken to the RESET position. SI AUTO BLOCK light illuminates and SI AUTO light goes to dim.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 7	STEP STANDARD:
Yes	Yes	Align Charging Pumps for Cold Leg Recirculation: Ensure both RHR Pumps A(B) are running.	Ensures both RHR Pumps A(B) are running by verifying red light on, green light off, proper amps and flow indicated.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 8	STEP STANDARD:
Yes	Yes	Close both MVG-8887A(B) RHR LP A(B) TO HOT LEGS	MVG-8887A(B) both indicate red light off, green light on.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 9	STEP STANDARD:
No	Yes	Isolate the Charging Pump miniflow lines: Close MVG-8106, CHG PP.	Turns Power lockout Train "A" to on then places MVG-8106 switch to close. Verifies red light off, green light on. Turn Train "A" power lockout switch to off.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 10	STEP STANDARD:
No	Yes	Close MVT-8109 A(B)(C), CHG PP A(B)(C).	Places MVT-8109 A(B)(C) to close. Verifies red light off, green light on for each valve.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 11	STEP STANDARD:
Yes	Yes	Open MVG-8706A(B), RHR LP A(B) TO CHG PP.	Places MVG-8706 A(B) switch to open. Verifies red light on, green light off for each valve.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 12	STEP STANDARD:
Yes	Yes	Close LCV-115B(D), RWST TO CHG PP SUCT.	Places LCV-115B(D) to close. Verifies red light off, green light on for each valve.

CUES:

The examinee must wait until MVG-8706A (B) are full open before closing LCV-115B (D).

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 13	STEP STANDARD:
Yes	No	Verify stable flow on FI-943, CHG LOOP B CLD/HOT LG FLOW GPM.	Verifies flow is stable on FI-943, CHG LOOP B CLD/HOT LG FLOW GPM.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 14	STEP STANDARD:
No	No	Verify two charging pumps are running	CHG/SI PUMP A and B indicates red light ON, green light OFF.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 15	STEP STANDARD:
No	Yes	Check 'C' charging pump aligned to 'A' train.	CHG/SI PUMP C XFER SWITCH XET 2000C on Train "A" light is lit.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 16	STEP STANDARD:
Yes	Yes	Split charging pump suction & discharge lines.	MVG-8131A and (B), LP B SUCT TO CHG PP C, indicates red light OFF, green light ON. MVG-8885, CHG LP A ALT TO COLD LEGS, indicates red light ON, green light OFF. MVG-8133A and (B), CHG PP C TO LP B DISCH, indicate red light OFF, green light ON.

CUES: ***SAT***

To prevent dead-heading "A" Chg Pp (miniflows closed), 8885 must be opened BEFORE closing 8133A or B. If not opened prior to, constitutes failure of this JPM. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 17	STEP STANDARD:
No	No	Ensure both MVB-9503A(B) are open.	Verifies MVB-9503A(B) open by observing red light on, green light off.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 18	STEP STANDARD:
No	No	Complete alignment of RB Spray for recirculation: Reset Containment Isolation.	RESET PHASE A - TRAIN A(B) CNTMT ISOL and RESET PHASE B - TRAIN A(B) CNTMT ISOL momentarily depressed.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 19	STEP STANDARD:
Yes	No	Close MVG-3002A(B) NAOH TO SPRAY PUMP A(B) SUCT	MVG-3002A(B) both indicate red light off, green light on

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 20	STEP STANDARD:
Yes	No	Place both ESF LOADING SEQ A(B) RESETS to: NON-ESF- LCKOUTS, AUTO-START BLOCKS.	ESF LOADING SEQ A(B) RESETS switches momentarily taken to the NON-ESF LOCKOUT position and then to the AUTO START BLOCKS position.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 21	STEP STANDARD:
Yes	No	Establish Instrument Air to the RB.	Operator verifies/starts one Instrument Air Compressor. PVA-2659, INST AIR TO RB AIR SERV and PVT-2660, AIR SPLY TO RB indicate red light ON, green light OFF.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 22	STEP STANDARD:
No	No	Verify RHR Sump are NOT blocked.	Notes normal RHR pump amps and discharge pressure.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 23	STEP STANDARD:
Yes	No	Shift the CCW Train to fast speed in the Active Loop.	Verifies CCW Train "A" is running in fast speed.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 24	STEP STANDARD:
No	No	Determine if transfer to Hot Leg Recirculation will be required: Check if this procedure was entered from EOP-2.0, LOSS OF SECONDARY COOLANT.	Checks initial conditions and determines that this procedure was entered from EOP-2.0.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 25	STEP STANDARD:
No	Yes	Prepare for Hot Leg Recirculation: Ensure MVG-8801B, HI HEAD TO COLD LEG INJ. is open. Close MVG-8801A.	MVG-8801A, HI HEAD TO COLD LEG INJ, indicates red light OFF, green light ON.

CUES:

SAT

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: JPS-005

DESCRIPTION: TRANSFER TO COLD LEG RECIRCULATION

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM NO: **JPS-029**

LOSS OF INTERMEDIATE RANGE INSTRUMENTATION

APPROVAL: DOW ***APPROVAL DATE:*** 6/20/2002

REV NO: 4

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

000-033-05-01 RESPOND TO INTERMEDIATE RANGE INSTRUMENTATION CHANNEL FAILURE

TASK STANDARD:

Power level stable at approx 10-4% reactor power. Level trip switch for N35 is in BYPASS.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

SIMULATOR PERFORM

REFERENCES: AOP-401.8

TOOLS:

:

EVALUATION TIME 5 ***TIME CRITICAL*** No ***10CFR55:*** 45(a)4

CANDIDATE:

TIME START:

TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: A Reactor Startup is in progress per GOP-3. Reactor power is approx 10E-5 CPS. P-6 has been blocked.

INITIATING CUES: The CRS directs NROATC to respond to annunciator(s).

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
Yes	Yes	Stabilize reactor power at current power level.	NROATC drives control rods inward to achieve a stable 0 DPM SUR and stabilize reactor power.

CUES: ***SAT***

The student may refer to ARP for directions to AOP-401.8. ***UNSAT***

COMMENTS:

CR	***SEQ***	***STEP:*** 2	***STEP STANDARD:***
Yes	Yes	Bypass the level trip for NI-35.	Positions the level trip switch for NI-35 to the BYPASS position.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 3	***STEP STANDARD:***
No	Yes	Verify IR & SR TRIP BYPASS annunciator energizes.	Observes IR&SR TRIP BYP annunciator (XCP-620-4-5) energizes by visual observation and acknowledges alarm.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 4	STEP STANDARD:
No	No	Check if Reactor Power is less than 7.5 x 10E-6%.	Verifies Reactor Power is greater than 7.5 x 10E-6%.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 5	STEP STANDARD:
No	No	Verify P6 is bright,	Verifies P6 status light is illuminated.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 6	STEP STANDARD:
No	No	Monitor the operable IRNI channel	Verifies NI-36 operating properly.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 7	STEP STANDARD:
No	No	Ensure NR-45 selected to operable channel.	Selects NR-45 to NI-36 position and verifies NI-35 is not selected.

CUES:

SAT

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: JPS-029

DESCRIPTION: LOSS OF INTERMEDIATE RANGE INSTRUMENTATION

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM NO: **JPS-043**

STUCK ROD

APPROVAL: DOW ***APPROVAL DATE:*** 6/20/2002

REV NO: 4

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

000-004-05-01 RESPOND TO CONTROL ROD MISALIGNMENT

TASK STANDARD:

The misaligned rod has been identified and control bank "D" has been aligned with the misaligned control rod.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

SIMULATOR PERFORM

REFERENCES: AOP-403.5

TOOLS:

EVALUATION TIME 15 ***TIME CRITICAL*** No ***10CFR55:*** 45(a)8

CANDIDATE:

TIME START:

TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: Reactor power is being reduced from 75% at a rate of 1%/min.

INITIATING CUES: CRS directs NROATC to perform the immediate and followup actions of AOP-403.5.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
Yes	No	Rotate rod control bank selector switch to MAN.	Rotates the ROD CNTRL BANK SEL switch to the MAN position.

CUES:

SAT

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 2	***STEP STANDARD:***
No	No	Stop any turbine load changes in progress.	Stops all turbine load changes by depressing load set INCREASE pushbutton until AT SET LOAD light illuminates.

CUES:

SAT

Spare operator may perform if directed.

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 3	***STEP STANDARD:***
No	No	Maintain Tavg-Tref within 5F.	Adjust turbine load to keep Tavg and Tref within 5 degrees.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 4	STEP STANDARD:
No	No	Monitor DRPI and step counter to identify misaligned control rod and affected control rod bank.	Monitors DRPI and determines that rod K-10 in bank "D" is misaligned high from other rods in bank "D".

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 5	STEP STANDARD:
No	No	Record control rod data.	Records misaligned control rod information; records control rod positions and group step counter demands.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 6	STEP STANDARD:
No	No	Record Control Rod positions and Group step counter demands.	Records rod and group data.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 7	STEP STANDARD:
No	No	Notify I&C Dept to investigate the cause of the failure.	Notify I&C Department to investigate.

CUES:

If necessary, prompt operator to identify stuck rod. Examiner informs the operator that the CRS has recorded rod positions and made proper notifications.

SAT
UNSAT

COMMENTS:

CR	SEQ	STEP: 8	STEP STANDARD:
No	No	Notify personnel and obtain information.	MDS, Rod Control Engineer, I&C, and Reactor Engineering notified. Power level and recovery rate obtained.

CUES:

Cue operator that CRS will notify MDS, Rod Control Sys Engineer, I&C, and Reactor Engineering. Cue operator that power level for rod recovery is <75% and rate of control rod movement is ó12 steps/minute. Cue operator I&C has determined there is no electrical problem.

SAT
UNSAT

COMMENTS:

CR	SEQ	STEP: 9	STEP STANDARD:
Yes	Yes	Rotate rod control bank selector switch CW to the affected bank position.	Rotate ROD CNTRL BANK SEL switch to the CBD position.

CUES:

SAT
UNSAT

COMMENTS:

CR	SEQ	STEP: 10	STEP STANDARD:
Yes	Yes	Drive the affected bank, 6 steps in the direction the rod is misaligned while monitoring DRPI.	Drives Bank "D" rods 6 steps OUT (toward stuck rod).

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 11	STEP STANDARD:
No	Yes	Return affected bank to its original position.	Drives Band "D" rods 6 steps IN.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 12	STEP STANDARD:
Yes	Yes	Determine if misaligned rod moved or failed to move.	Determines that rod K-10 failed to move.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 13	STEP STANDARD:
Yes	Yes	Rotate rod control bank selected switch CCW to manual.	Rotates ROD CNTRL BANK SEL switch to MAN.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 14	STEP STANDARD:
Yes	Yes	Drive control bank to align with the misaligned control rod.	Drives control rod bank "D" out to align with control rod K-10 (All Bank "D" rods at same DRPI position).

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 15	STEP STANDARD:
No	No	Determine if plant shutdown is required.	Determines plant shutdown is required.

CUES:

SAT

Prompt student for next action if not stated.

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: JPS-043

DESCRIPTION: STUCK ROD

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM NO: **JPS-042**

IDENTIFY AND ISOLATE RCS LEAK TO CCWS

APPROVAL: DOW ***APPROVAL DATE:*** 6/20/2002

REV NO: 3

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

344-001-03-02 ANALYZE INDICATIONS TO DETERMINE THAT ABNORMAL PLANT EVENT IS IN PROGRESS

TASK STANDARD:

Intersystem leakage stopped by isolating letdown per ARP-019-XCP-644, pt 1-3.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

SIMULATOR PERFORM

REFERENCES: ARP-019-XCP-644

TOOLS:

EVALUATION TIME 15 ***TIME CRITICAL*** No ***10CFR55:*** 45(a)9

CANDIDATE:

TIME START:

TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: The plant is operating at 100% power with all systems in Automatic.

INITIATING CUES: CRS directs NROATC to respond to RM-L2A HI RAD annunciator.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
No	No	Verify automatic action has occurred	Verifies green light ON for PVV-7096, CC SURGE TK VLV.

CUES:

SAT

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 2	***STEP STANDARD:***
No	No	Verify high radiation via COMPONENT COOLING LIQUID MONITORS on XCP-644	Identifies COMPONENT COOLING LIQUID MONITORS RML2A RADIATION MONITORS meters and R/R-5 trending up and are above high alarm setpoint on XCP-644.

CUES:

SAT

R/R-5 Is trending up and agrees with RML-2A.

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 3	***STEP STANDARD:***
No	No	Notify Health Physics personnel to survey CCW system.	Instruct Health Physics personnel to check radiation levels in CCW system in the areas of letdown heat exchanger, RCS and PZR sample coolers, RCP Thermal Barrier lines, Excess Letdown Heat Exchanger for abnormal radiation levels.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 4	STEP STANDARD:
No	No	Notify Chemistry to sample CCW.	Notifies Chemistry to sample CCW system.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 5	STEP STANDARD:
No	No	Monitor MCB indications for leak.	Checks no white lights on M1-CC and M2-CC.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 6	STEP STANDARD:
Yes	Yes	Determine leak is in Letdown Hx	NROATC announces leak is in letdown Hx from MCB and RMS indications

CUES: ***SAT***

WHEN THE OPERATOR INDICATES THE LEAK LOCATION cue them that the CCW return line from LETDOWN HEAT EXCHANGER reads 400 mR/hr. ***UNSAT***

COMMENTS:

CR	*SEQ*	*STEP:* 7	*STEP STANDARD:*
No	No	Places excess letdown in service per SOP-102	HCV-137 indicates red light OFF, green light ON. MVG-9583 indicates red light ON, green light OFF. PVT-8153 and 8154 indicate red light ON, green light OFF. Adjusts HCV-137 pot. as necessary.

CUES: ***SAT***

WHEN EXAMINEE DETERMINES LEAK IS IN LETDOWN HX CRS DIRECTS NROATC TO PERFORM THE ACTION IN THE ARP TO ISOLATE LEAKAGE FROM THE LTDN HX ***UNSAT***

COMMENTS:

CR	*SEQ*	*STEP:* 8	*STEP STANDARD:*
Yes	Yes	Closes PVT-8149A (B, C), LCV-460, LCV-459 and PVT-8152	PVT-8149A,B,C LTDN ORIFICE A,B,C ISOL and LCV-459, 460 and PVT-8152 LTDN LINE ISOL indicates red light OFF, green light ON.

CUES: ***SAT***

ISOLATION OF LETDOWN FLOW PATH BY ANY ONE OF LCV-459, LCV-460, 8149A/B/and C, IS SUFFICIENT TO ACCOMPLISH TASK. ***UNSAT***

COMMENTS:

CR	*SEQ*	*STEP:* 9	*STEP STANDARD:*
No	No	Closes PCV-145	Places LO PRESS LTDN PCV-145 A/M station in MANUAL and reduces output to zero

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 10	STEP STANDARD:
No	No	Closes FCV-122	Places CHG FLOW FCV-122 A/M station in MANUAL and reduces output to zero

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 11	STEP STANDARD:
No	No	Adjusts HCV-186 seal injection control valve to maintain 6-13 gpm per pump	Adjusts INJ FLOW HCV-186 Hagan potentiometer if necessary to keep RCP A/B/C INJ FLOW GPM (IFI-130A/127A/124A) between 6 and 13

CUES:

SAT

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: JPS-042

DESCRIPTION: IDENTIFY AND ISOLATE RCS LEAK TO CCWS

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM NO: **JPS-093**

RESPOND TO IMMINENT PRESSURIZED THERMAL SHOCK

APPROVAL:GAL ***APPROVAL DATE:08/23/02***

REV NO: 0

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

000-098-05-01 RESPOND TO ANTICIPATED PRESSURIZED THERMAL SHOCK

TASK STANDARD:

Depressurize the RCS in accordance with EOP-16.0 through step 16.c. The use of applicable Human Performance Tools (3-way communications, self checking, peer checking, phonetic alphabet, etc) and industrial safety practices meets expectations.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

SIMULATOR PERFORM

REFERENCES:

TOOLS: : EOP-16.0

EVALUATION TIME 15 ***TIME CRITICAL*** NO ***10CFR55:*** 45a8

CANDIDATE:

TIME START:

TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS: None

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: Plant was operating at 100% reactor power.
Events have occurred that resulted in three faulted S/Gs
EOP-16.0 is entered from EOP-12.0, Monitoring of Critical Safety Functions
EOP-16.0 step 1 has been completed.

INITIATING CUES: CRS directs NROATC to perform the actions of EOP-16.0 step 2 through step 16.c.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
Yes	Yes	Check RCS Tcold stable or increasing	Check RCS Tcold on TR-410.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 2	***STEP STANDARD:***
No	Yes	Check PZR PORV Block Valves	Verify Power is available to the PZR PORV BLOCK VALVES as indicated by the position indicating lights on the switches for MVG-8000A, B, C are illuminated. At least one Block Valve Red indicating light is lit and Green light is extinguished.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 3	***STEP STANDARD:***
No	Yes	Check if either XCP-6106 1-11 and 2-11 or XCP-6106 1-12 and 2-12 are bright.	Indicating lights on XCP-6106 are verified.

CUES: ***SAT***

If monitor lights are not bright step 4 may be bypassed. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 4	STEP STANDARD:
No	No	Verify RCS pressure is less than 450 psig.	Verify RCS pressure on at least one of the following PI-402A, 402B, 403, PR-402.

CUES: ***SAT***

This step may be bypassed if step 3 monitor lights are not bright. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 5	STEP STANDARD:
No	No	Verify PZR pressure is less than 2335 psig.	Verify PZR pressure on at least one of the following PI-455, 456, 457, 444, 445, PR-444.

CUES: ***SAT***

This step may be bypassed if monitor lights in step 3 are bright. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 6	STEP STANDARD:
No	Yes	Ensure all PZR PORVs are closed.	The Green indicating lights on the PORV switches are illuminated and the Red lights are extinguished.

CUES: ***SAT***

UNSAT

COMMENTS:

CR ***SEQ*** ***STEP:*** 7 ***STEP STANDARD:***

No Yes Verify SI flow on FI-943, CHG LOOP B CLD/HOT LG FLOW GPM. Flow is verified on FI-943.

CUES: ***SAT***

UNSAT

COMMENTS:

CR ***SEQ*** ***STEP:*** 8 ***STEP STANDARD:***

No Yes Check if SI can be terminated. Check is RCS subcooling on TI-499A(B) is greater than 80 degrees. RVLIS level indicated on LI-1311(1321) or LI-1312(1322) is greater than; 0 RCPs=61%NR; 1 RCP=28%WR; 2 RCP=38%WR; 3RCP=83%WR.

CUES: ***SAT***

UNSAT

COMMENTS:

CR ***SEQ*** ***STEP:*** 9 ***STEP STANDARD:***

Yes Yes Reset both SI Reset Train A(B) Switches. Both SI Reset switches actuated, the SI ACT light goes dim and the SI AUTO BLOCK light illuminates.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 10	STEP STANDARD:
No	No	Reset Containment Isolation.	Depress both the Train A and Train B Phase A reset pushbuttons. Depress both the Train A and Train B Phase B reset pushbuttons.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 11	STEP STANDARD:
No	No	Place both ESF Loading Seq A(B) Resets to;	Position Both ESF Loading Sequencer switches to NON_ESF Lockout and AUTO-START Blocks.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 12	STEP STANDARD:
Yes	Yes	Establish Instrument Air to the RB.	Verify B Instrument Air Compressor is running and direct unit 5 to reset the relays on A Instrument Air Compressor. Open PVA-2659, INST AIR TO RB AIR SERV as indicated by the Red indicating light illuminated and the Green indicating light extinguished. Open PVT-2660, AIR SPLY TO RB as indicated by the Red indicating light illuminated and the Green indicating light extinguished.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 13	STEP STANDARD:
Yes	Yes	Stop the following SI Pumps and place in Standby.	Stop any RHR Pump operating in the SI mode as indicated by the Red light extinguished and the Green light lit. Stop all but one Charging Pump as indicated by Only one Charging Pump Red indicating light Lit.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 14	STEP STANDARD:
Yes	Yes	Establish Normal Charging.	Close FCV-122 as indicated by the Red closed indicating light on the manual controller being illuminated. Open both MVG-8107 and 8108 as indicated by the Red open light illuminated and the Green closed light extinguished. Adjust FCV-122 to obtain 60 gpm as indicated on FI-122. Close both MVG-8801A(B) as indicated by the Green indicating light lit and the Red indicating light extinguished.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 15	STEP STANDARD:
Yes	Yes	Verify SI flow is not required.	Check is RCS subcooling on TI-499A(B) is greater than 30 degrees. RVLIS level indicated on LI-1311(1321) or LI-1312(1322) is greater than; 0 RCPs=61%NR; 1 RCP=28%WR; 2 RCP=38%WR; 3RCP=83%WR.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 16	STEP STANDARD:
Yes	Yes	Verify RCS Thot is stable.	Verify RCS Thot as read on TR-413.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 17	STEP STANDARD:
Yes	Yes	Isolate all SI Accumulators.	Checks if RCS subcooling on TI-499A(B) is greater than 30 degrees. Checks if RVLIS level indicated on LI-1311(1321) or LI-1312(1322) is greater than; 0 RCPs=61%NR; 1 RCP=28%WR; 2 RCP=38%WR; 3RCP=83%WR. Directs IB Operator to unlock and close the breakers for the Accumulator Discharge Isolation Valves XMC1DA2X 08AE - XVG8808A-SI XMC1DA2X 08FJ - XVG08808C-SI XMC1DB2Y 16IM - XVG8808B-SI , indicated by the position indicating lights for the valves illuminating. Close all the Accumulator Discharge Isolation Valves as indicated by the Green position indicating lights illuminated and the Red indicating lights extinguished.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 18	STEP STANDARD:
Yes	Yes	Depressurize the RCS to reduce subcooling.	Cycle one PZR PORV as necessary to deprssurize the RCS using the MCB control switch. Operate Charging Pumps and valves as necessary to maintain RCS subcooling greater than 30 degrees as indicated on TI-499A(B).

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 19	STEP STANDARD:
Yes	Yes	Continue depressurization until either of the following are met;	RCS Subcooling as indicated on TI-499A(B) is less than 40 degrees OR PZR Level is greater than 68% (54%) as indicated on LI-459A, 460, 461 OR RCS pressure is less than 125 psig as indicated on PI-402A, 402B, 403, PR-402

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 20	STEP STANDARD:
Yes	Yes	Stop RCS depressurization.	Close any open PZR PORV as indicated by the Green indicating lights being illuminated and the Red indicating lights extinguished.

CUES:

SAT

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: JPS-093

DESCRIPTION: RESPOND TO IMMINENT PRESSURIZED THERMAL SHOCK

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM NO: **JPSF-019**

MANUALLY INITIATE REACTOR BUILDING SPRAY

APPROVAL: TRH ***APPROVAL DATE:*** 8/2/2002

REV NO: 6

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

026-005-01-01 MANUALLY INITIATE REACTOR BUILDING SPRAY

TASK STANDARD:

At least one train of containment spray is manually actuated with >2500 gpm per EOP-1.0. RCPs are secured due to Phase B actuation when directed by procedure. The use of applicable Human Performance Tools (3-way communications, self checking, peer checking, phonetic alphabet, etc) and industrial safety practices meets expectations.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

SIMULATOR PERFORM

REFERENCES: EOP-1.0

:

TOOLS:

EVALUATION TIME 5 ***TIME CRITICAL*** NO ***10CFR55:*** 45(a)8

CANDIDATE:

TIME START:

TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: The reactor has tripped from 100% power and an SI has occurred.

INITIATING CUES: The CRS directs the NROATC to perform step 8 of EOP-1.0.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
No	No	Recognizes failure of RB spray to actuate.	Verifies RB pressure >12.05 PSIG, and RB SPR ACT and PHASE B ISOL annunciator are not lit.

CUES:

SAT

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 2	***STEP STANDARD:***
No	No	Actuate RB Spray by placing both CS-SGA1 and CS-SGA2 switches to ACTUATE	Places (CS-SGA1 and CS-SGA2) to the ACTUATE position.

CUES:

SAT

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 3	***STEP STANDARD:***
Yes	No	Actuate RB spray by placing both CS-SGB1 and CS-SGB2 switches to ACTUATE.	Places (CS-SGB1 AND CS-SGB2) to the ACTUATE position.

CUES:

SAT

UNSAT

If examinee attempts to operate the two train A switches (top pair), he should recognize failure of spray to actuate and operate the Train B (bottom pair) of switches.

NOTE: If examinee does not operate the Train B (bottom pair) of switches, then steps 4 through 7 are critical steps.

COMMENTS:

CR	SEQ	STEP: 4	STEP STANDARD:
No	No	Verify all RB spray, phase B isolation monitor lights are bright.	PHASE B Isol monitor lights are bright on XCP-6105.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 5	STEP STANDARD:
No	No	Ensure MVG-3001A(B) RWST to spray pump A(B) SUCT, are open.	MVG-3001A&B indicates red light ON, green light OFF.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 6	STEP STANDARD:
No	No	Ensure MVG-3002A(B) NAOH to spray pump SUCT, are open.	MVG-3002A&B indicates red light ON, green light OFF.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 7	STEP STANDARD:
No	No	Ensure MVG-3003A(B) SPRAY HDR ISOL LOOP are open.	MVG-3003A&B indicates red light ON, green light OFF.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 8	STEP STANDARD:
Yes	No	Ensure both RB spray pumps are running.	A&B RB Spray Pumps are running by red light ON indication and normal running amps.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 9	STEP STANDARD:
Yes	No	Verify flow on FI-7368 & FI-7378 SPRAY PP DISCH FLOW.	Verify on FI-7368, SPR PP A DISCH FLOW, and FI-7378, SPR PP B DISCH FLOW, are > 2500 gpm.

CUES:

SAT

UNSAT

COMMENTS:

CR	*SEQ*	*STEP:* 10	*STEP STANDARD:*
Yes	No	Stop all RCPs.	A, B, & C RCP indicate OFF by green light ON and 0 running amps.

CUES:

SAT

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: JPSF-019

DESCRIPTION: MANUALLY INITIATE REACTOR BUILDING SPRAY

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM NO: **JPSF-046**

TRANSFER IN-SERVICE CHARGING PUMP (NRC)

APPROVAL: DOW ***APPROVAL DATE:*** 6/24/2002

REV NO: 1

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

000-022-05-01 RESPOND TO LOSS OF REACTOR COOLANT MAKEUP (CHARGING)

TASK STANDARD:

'A' Charging pump running. 'C' Charging pump secured within one minute of the start of 'C' Charging pump. The use of applicable Human Performance Tools (3-way communications, self checking, peer checking, phonetic alphabet, etc) and industrial safety practices meets expectations.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

SIMULATOR PERFORM

REFERENCES: SOP-102

TOOLS:

EVALUATION TIME 5 ***TIME CRITICAL*** NO ***10CFR55:*** 45(a)8

CANDIDATE:

TIME START:

TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: The plant is operating at 100% power. It is necessary to start "C" charging pump on "A" Train in order to equalize run time.

INITIATING CUES: CRS directs NROATC to place 'C' charging pump in service on 'A' train and remove 'A' charging pump, per SOP-102, Section III.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
No	Yes	Verify MCB lineup for aligning charging pump "C" to "A" Train.	Complete applicable (MCB) portions of SOP-102 Att. VA.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 2	***STEP STANDARD:***
No	Yes	Verify local lineup for aligning charging pump "C" to "A" Train.	AB operator reports Attachment VA of SOP-102 complete with the exception of charging pump breakers.

CUES: ***SAT***

Booth operator cues examinee that local lineup for aligning charging pump 'C' to 'A' train per Attachment VA is complete with exception of charging pump breakers. ***UNSAT***

COMMENTS:

CR	***SEQ***	***STEP:*** 3	***STEP STANDARD:***
Yes	Yes	Directs IB operator to rack up "C" charging pump on "A" train.	IB operator reports "C" charging pump racked up on "A" train.

CUES: ***SAT***

UNSAT

COMMENTS:

CR SEQ ***STEP:*** 4

No Yes Ensure the Charging pump 'C' Auxiliary Oil pump is running.

STEP STANDARD:

Verifies XPP-43C-PP1, CHG PP C AUX OIL PP, switch in AUTO and red light ON.

CUES:

SAT

UNSAT

COMMENTS:

CR SEQ ***STEP:*** 5

No Yes Ensure 'A' Train CCW is operating per SOP-118.

STEP STANDARD:

Verifies that 'A' CCW pp is running via red light ON and amp indication.

CUES:

SAT

UNSAT

COMMENTS:

CR SEQ ***STEP:*** 6

No Yes Ensure 'A' Train chill water is running.

STEP STANDARD:

Verifies that 'A' Train Chill Water is running via red light ON on 'A' Train Chiller and Chill Water PP, and green light OFF.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 7	STEP STANDARD:
Yes	Yes	Start 'C' charging pump.	"C" charging pump (Train A) indicates red light ON, green light OFF, and normal running amps.

CUES:

SAT

UNSAT

THIS IS THE START OF THE TIME CRITICAL PORTION RECORD

TIME_____

COMMENTS:

CR	SEQ	STEP: 8	STEP STANDARD:
No	No	Verify XPP-43C-PP1 stops automatically when charging pump comes up to full speed.	Verifies green OFF light is lit and red AUTO light is deenergized.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 9	STEP STANDARD:
No	No	Monitor current and discharge pressure for proper pump operation.	Ensures current between 30 and 50 amps and ensures PI-121, CHG PRESS PSIG, is between 2650 and 2850 psig.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 10	STEP STANDARD:
Yes	Yes	Verifies CCW flow to 'C' charging pump.	XVG-9684C, CCW TO CHG PP C indicates red light OFF, green light ON. CCW TO CHG PP C VLV NOT FULL OPEN annunciator in alarm.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 11	STEP STANDARD:
Yes	Yes	Stops "C" charging pump.	Takes "C" charging pump switch to STOP position. Verifies green light ON for BKR OPEN indication on "C" charging pump (within 1 minute).

CUES:

SAT

UNSAT

THIS IS THE END OF THE TIME CRITICAL PORTION RECORD TIME_____

COMMENTS:

CR	SEQ	STEP: 12	STEP STANDARD:
No	No	Informs CRS of failure on 'C' charging pump.	Informs CRS of failure of CCW valve to 'C' charging pump (XVG-9684C) to open.

CUES:

SAT

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: JPSF-046

DESCRIPTION: TRANSFER IN-SERVICE CHARGING PUMP (NRC)

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM NO: **JPPF-012**

LOCALLY START AN EMERGENCY D/G DURING A LOSS OF OFFSITE POWER (WITH FAILURE OF FIELD TO FLASH)

APPROVAL: DOW ***APPROVAL DATE:*** 6/19/2002

REV NO: 7

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

064-002-01-04 MANUALLY START A DIESEL GENERATOR LOCALLY

TASK STANDARD:

Diesel Generator 'A' is started locally with frequency 60 Hz and Voltage 7200 Volts. The use of applicable Human Performance Tools (3-way communications, self checking, peer checking, phonetic alphabet, etc) and industrial safety practices meets expectations.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

PLANT SIMULATE

REFERENCES: EOP-6.0

TOOLS: EOP-6.0 ATTACHMENT 1

:

EVALUATION TIME 20 ***TIME CRITICAL*** No ***10CFR55:*** 45(a)8

CANDIDATE: TIME START:

TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: Diesel 'A' fails to start on a loss of AC power. EOP-6.0: Attachment 1, Step 1 has been completed.

INITIATING CUES: Control Room Operator directs starting the "A" D/G per Attachment 1 of EOP-6.0.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
No	Yes	At the diesel generator local control panel, monitor the alarms and indications to determine start failure (DG-436).	Alarms and indications monitored on local control panel, XCX-5201. START FAILURE annunciator in alarm.

CUES: ***SAT***

UNSAT

Examiner informs operator that there is a "start failure" annunciator (Window 6-1) and the engine has not started. No other alarms are present. If asked about D/G air and fuel parameters, inform operator that starting air tank pressure is 400#, fuel oil system is normal and there are no flags on the relay panel.

COMMENTS:

CR	***SEQ***	***STEP:*** 2	***STEP STANDARD:***
No	Yes	Ensure VOLTAGE REGULATOR is in AUTO.	Operator verifies VOLTAGE REGULATOR is in AUTO position.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 3	***STEP STANDARD:***
No	Yes	Momentarily depress GEN RELAYS RESET pushbutton.	Operator depresses GEN RELAYS RESET pushbutton.

CUES: ***SAT***

UNSAT

Cue Operator that D/G did not start after GEN RELAYS RESET pushbutton is depressed.

COMMENTS:

CR	SEQ	STEP: 4	STEP STANDARD:
No	Yes	Notifies control room to place EXCITER Switch to RESET.	Control Room notifies operator EXCITER Switch placed in RESET position.

CUES: ***SAT***

Cue Operator that D/G did not start after EXCITER Switch taken to RESET by Control Room. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 5	STEP STANDARD:
No	Yes	Attempt to start the Diesel Generator by depressing the ENGINE SHUTDOWN RESET pushbutton	START FAILURE annunciator clears. D/G engine does not start. START FAILURE annunciator alarms 7 seconds after it clears.

CUES: ***SAT***

Cue Operator that D/G did not start after the ENGINE SHUTDOWN RESET switch was placed in RESET by Control Room. Cue Operator the START FAILURE annunciator clears, but reenergizes 7 seconds later. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 6	STEP STANDARD:
Yes	Yes	Place REMOTE/LOCAL/MAINT Switch in LOCAL.	Local control switch indicates LOCAL .

CUES: ***SAT***

This is critical because it permits local voltage adjustment. Since diesel did not start, operator should go to Step 9. This is the alternative path aspect of this JPM. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 7	STEP STANDARD:
No	Yes	Momentarily depress the EMERG START pushbutton.	EMERG START pushbutton depressed.

CUES: ***SAT***

Cue operator that there is no change in indicators when the EMERG START pushbutton is depressed. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 8	STEP STANDARD:
Yes	Yes	Attempt to manual start using the Main Air Start Valve manual start (on either end of DG Engine).	Operator engages spanner wrench and depresses air start valve XVM-10996A or XVM-10996B for at least 5 seconds.

CUES: ***SAT***

Cue operator that engine is cranking, starts to accelerate within five seconds. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 9	STEP STANDARD:
No	Yes	Observe diesel generator starts and accelerates to 514 rpm.	Operator observes tachometer. 'A' D/G tachometer indicates ~ 510 RPM.

CUES: ***SAT***

By pointing to the approximate center of the green band on the ENGINE TACHOMETER, cue operator that the D/G engine RPM ~ 510 RPM. ***UNSAT***
Cue operator that READY FOR LOAD light is NOT lit if "REQUESTED".

COMMENTS:

CR	SEQ	STEP: 10	STEP STANDARD:
No	Yes	Verifies D/G voltage 6840-7344 Volts.	D/G 'A' AC VOLTMETER indicates 0 Volts.

CUES: ***SAT***

Cue operator that the voltage and frequency are zero if requested. If operator points to either VOLTMETER GENERATOR or VOLTMETER BUS to determine voltage, always inform operator voltage is ZERO by pointing to 0 on gauge. (These indicators do not work unless the SYNCHROSCOPE is ON.) ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 11	STEP STANDARD:
Yes	Yes	Momentarily rotate the FIELD FLASH Switch to FLASH.	Operator rotates FIELD FLASH Switch to FLASH. D/G 'A' AC Voltmeter indicates 6900 Volts.

CUES: ***SAT***

If operator correctly takes FIELD FLASH switch to FLASH, by pointing to just above the bottom red mark, inform operator that voltage is 6900 V. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 12	STEP STANDARD:
No	Yes	Depress EMERG START RESET Pushbutton.	EMERG START RESET Pushbutton depressed.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 13	STEP STANDARD:
No	Yes	Reset annunciators on XCX-5201.	Annunciator reset pushbutton depressed on XCX-5201.

CUES: ***SAT***

Cue operator that all alarms on XCX5201 are clear except LOCAL CONTROL. ***UNSAT***

COMMENTS:

CR	SEQ	STEP:	14	STEP STANDARD:
Yes	Yes	Depress TEST START Pushbutton		Operator depresses TEST START Pushbutton.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP:	15	STEP STANDARD:
Yes	Yes	Verify D/G output breaker closed.		Verifies D/G 'A' breaker indicates red light ON.

CUES: ***SAT***

Cue operator that breaker's red light is lit ONLY after the operator indicates he will check that indication. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 16	STEP STANDARD:
No	Yes	Using the AUTO VOLTAGE CONTROL RAISE-LOWER switch, adjust voltage to 7200 Volts.	Operator adjusts voltage control switch until voltage of approximately 7200 Volts is observed.

CUES: ***SAT***

Cue operator that voltage is 6900 V before adjustment and 7200 V after correct adjustment. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 17	STEP STANDARD:
No	Yes	Adjust frequency to 60 Hz using GOVERNOR RAISE-LOWER switch	Operator positions governor switch to raise to adjust frequency until 60 hz is observed on the frequency meter.

CUES: ***SAT***

Cue operator that frequency is 59.5 Hz before adjustment and 60 Hz after correct adjustment. ***UNSAT***

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: JPPF-012

DESCRIPTION: LOCALLY START AN EMERGENCY D/G DURING A LOSS OF OFFSITE POWER (WITH FAILURE OF FIELD TO FLASH)

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM NO: **JPPF-049**

(NRC EXAM MODIFIED VERSION OF JPPF-047)
CONTROL ROOM EVACUATION (DUTIES OF BOP OPERATOR)

APPROVAL: TRH ***APPROVAL DATE:*** 7/18/2002

REV NO: 0

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

000-068-05-01 PERFORM CONTROL ROOM EVACUATION

TASK STANDARD:

AOP-600.1 ATT. II performed with the following complete: 1. All MFPs have been tripped, 2. Rod Drive MG set feeder breakers have been tripped, 3. RCP "B" or "C" Breaker has been tripped ('A' RCP is tripped already), 4. Two condensate pumps have been tripped, 5. Three FWBP's have been tripped. The use of applicable Human Performance Tools (3-way communications, self checking, peer checking, phonetic alphabet, etc) and industrial safety practices meets expectations.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

PLANT SIMULATE

REFERENCES:

TOOLS: AOP-600.1, ATT. II, STEPS 10-12

EVALUATION TIME 14 ***TIME CRITICAL*** No ***10CFR55:*** 45(a)13

CANDIDATE:

TIME START:

TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:

QUESTION GRADE: PERFORMANCE

EXAMINER:

SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: The plant is operating at 100% power, with all controls in automatic. A bomb threat has been received in the control room. The SS has directed a control room evacuation. AC power is available to both ESF Buses.

INITIATING CUES: The Control Room Supervisor directs the BOP Operator to perform ATT. 2 of AOP-600.1, Steps 10 through 12.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
No	Yes	Verifies reactor has been tripped.	Calls control room and verifies reactor has been tripped.

CUES: ***SAT***

Examiner cues examinee that the reactor has been tripped. ***UNSAT***

COMMENTS:

CR	***SEQ***	***STEP:*** 2	***STEP STANDARD:***
Yes	Yes	Locally trip all MFPs (436' TB).	Pulls MFP "PULL TO TRIP" handle on front standard for MFP's "A" "B" & "C". Verifies trip by noting RPM decrease locally OR trips MFPs from local DCS station.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	***SEQ***	***STEP:*** 3	***STEP STANDARD:***
Yes	Yes	Trips ROD DRIVE M/G SET "B" - XMG0001B-CR, XSW1B1 06C.	Trips rod drive MG set "B" bkr 06C at XSW-1B1 by pushing on red TRIP pushbutton on left side on front of breaker. Verifies a green "OPEN" flag results and red light OFF, green light ON.

CUES: ***SAT***

Instructor provides feedback of "no change in status" if examinee indicates he/she would trip a 480V breaker using the TRIP Pushbutton on the right side of the breaker. This p/b only works when the breaker is racked out to the "test" position. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 4	STEP STANDARD:
No	Yes	Check status of XSW1A 06 FD WTR BOOSTER PUMP A XPP0028A-FW breaker.	Verifies that the "A" FWBP, bkr 06 is closed by observing red light on outside of cubicle door.

CUES: ***SAT***

Examiner informs examinee that the "A" FWBP, bkr 06 red light is lit. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 5	STEP STANDARD:
No	Yes	Checks status of XSW1A 09, Rx COOLANT PUMP A XPP0030A-RC.	Checks RCP "A" breaker at XSW1A 09. Verifies a green light on outside of cubicle floor.

CUES: ***SAT***

Cue examinee that RCP "A" Bkr has a green light lit on front of cubicle. ~~(Note: This will "setup" alternate path portion of this JPM.~~ Examinee will have to leave either 'B' or 'C' RCP running in Step 12.6.) ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 6	STEP STANDARD:
No	Yes	Check status of XSW1A 07, COND PUMP A XPP0042A-CO breaker.	Verifies that the "A" condensate pump bkr 07 is closed by observing red light on outside of cubicle door.

CUES: ***SAT***

Examiner informs examinee that the "A" condensate pump breaker red light is lit. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 7	STEP STANDARD:
Yes	Yes	Trips XSW1B 09, COND PUMP B XPP0042B-CO breaker.	Trips breaker XSW1B 09 for Cond Pump "B" by pushing the "MANUAL TRIP" lever on front of breaker (inside cubicle door). Verifies a green light on outside of cubicle door results.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 8	STEP STANDARD:
Yes	Yes	Trips XSW1C 06, COND PUMP C XPP0042C-CO breaker.	Trips bkr XSW1C 06 for Cond Pump "C" by pushing the "MANUAL TRIP" lever on front of breaker (inside cubicle door). Verifies a green light on outside of cubicle door results.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 9	STEP STANDARD:
Yes	Yes	Trips XSW1B 06, FD WTR BOOSTER PUMP B XPP0028B-FW breaker.	Trips the FWBP "B" bkr 06 manually at XSW-1B by pushing the "MANUAL TRIP" lever on front of breaker (inside cubicle door). Verifies a green light on outside of cubicle door results.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 10	STEP STANDARD:
Yes	Yes	Trips XSW1B 13, FD WTR BOOSTER PUMP D XPP0028D-FW breaker.	Trips the FWBP "D" bkr 13 manually at XSW-1B by pushing the "MANUAL TRIP" lever on front of breaker (inside cubicle door). Verifies a green light on outside of cubicle door results.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 11	STEP STANDARD:
Yes	Yes	Trips XSW1C 08, FD WTR BOOSTER PUMP C XPP0028C-FW breaker. the FWBP "C" breaker.	Trips the FWBP "C" bkr 08 manually at XSW-1C by pushing the "MANUAL TRIP" lever on front of breaker (inside cubicle door). Verifies a green light on outside of cubicle door results.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 12	STEP STANDARD:
Yes	Yes	Trips XSW1B 07, Rx COOLANT PUMP B XPP0030B-RC "OR" XSW1C 03, Rx COOLANT PUMP C XPP0030C-RC breaker.	Trips the RCP "B" bkr 07 at XSW-1B (OR RCP "C" bkr 03 at XSW-1C) by pushing the "MANUAL TRIP" lever on front of breaker (inside cubicle door). Verifies a green light on outside of cubicle door results.

CUES: ***SAT***

~~This is the alternative path portion of this JPM.~~ ***UNSAT***

COMMENTS:

Examiner ends JPM at this point.

JPM NO: JPPF-049

DESCRIPTION: (NRC EXAM MODIFIED VERSION OF JPPF-047) CONTROL ROOM EVACUATION (DUTIES OF BOP OPERATOR)

IC SET:

INSTRUCTIONS:

COMMENTS:

V.C. SUMMER NUCLEAR STATION
JOB PERFORMANCE MEASURE

JPM NO: **JPPF-NRC**

ESTABLISH DEMINERALIZED WATER ALTERNATE COOLING TO CHARGING PUMPS (FAILURE OF CHILLED WATER SUPPLY).

APPROVAL: DOW ***APPROVAL DATE:*** 6/19/2002

REV NO: 4

CANDIDATE

EXAMINER:

THIS JPM IS APPROVED

TASK:

004-001-04-04 ESTABLISH DEMINERALIZED WATER ALTERNATE COOLING TO CHARGING PUMPS

TASK STANDARD:

Examinee has recognized the damage to the piping in chill water system. Demineralized Water alternate cooling is provided to "B" charging pump in accordance with AOP-118.1, Attachment 2 and 2B. The use of applicable Human Performance Tools (3-way communications, self checking, peer checking, phonetic alphabet, etc) and industrial safety practices meets expectations.

PREFERRED EVALUATION LOCATION ***PREFERRED EVALUATION METHOD***

PLANT SIMULATE

REFERENCES:

:

TOOLS: AOP-118.1 ATT. 1, 1B, 2, and 2B
FLASHLIGHT

EVALUATION TIME 15 ***TIME CRITICAL*** No ***10CFR55:*** 45(a)12

CANDIDATE: TIME START:
TIME FINISH:

PERFORMANCE RATING: SAT: UNSAT:
QUESTION GRADE: PERFORMANCE

EXAMINER:
SIGNATURE DATE

COMMENTS:

OPERATOR INSTRUCTIONS:

SAFETY CONSIDERATIONS:

READ TO OPERATOR:

WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

INITIAL CONDITION: Total loss of Component Cooling Water with CRS implementing AOP-118.1 Chilled Water System, Demineralized Water System, and Fire Service System are all available for CHG/SI pump alternate cooling per AOP-118.1

INITIATING CUES: The CRS directs you, the ABLL watch, to establish alternate cooling to the "B" Charging Pump, using chilled water per AOP-118.1, Attachment 1 and 1B.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

STEPS

CR	***SEQ***	***STEP:*** 1	***STEP STANDARD:***
No	Yes	Obtain cooling supply hoses and hose fittings (AB-400)	Cooling supply hose and connections obtained from dedicated gang box (AB-400)

CUES: ***SAT***

Have operator point out hoses and discuss how the lines would be connected, versus removing the equipment out of the Gang Box ***UNSAT***

COMMENTS:

CR	***SEQ***	***STEP:*** 2	***STEP STANDARD:***
No	No	Connect cooling supply hose to IPX099062B-HR-VU, for 'B' Charging pump (AB-400)	Cooling supply hose connected to IPX09062B-HR-VU, HIGH ROOT TO IPX9062B, (AB-400)

CUES: ***SAT***

When operator attempts to remove 3/4" female cap, prompt them that the pipe shears flush with the insulation when pressure is applied to the cap for removal. ***UNSAT***

COMMENTS:

CR	***SEQ***	***STEP:*** 3	***STEP STANDARD:***
No	No	Operator determines that Chilled Water System cannot be used due to damaged connection.	Operator correctly determines that ATT. 1 and 1B are no longer appropriate.

CUES: ***SAT***

The operator should determine that the next viable option is to use Demineralized Water. They may either make that determination on their own, or simply report to the Control Room of the problem encountered. If the Control Room is notified, the operator should be cued to now use ATT 2 and 2B to supply the "B" Charging Pump from Demineralized Water. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 4	STEP STANDARD:
No	No	Obtain cooling supply hoses and hose fittings to support Demineralized Water System connection (AB-400)	Cooling supply hose and connections obtained from dedicated gang box (AB-400)

CUES:

Have operator point out hoses and discuss how the lines would be connected, versus removing the equipment out of the Gang Box

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 5	STEP STANDARD:
Yes	Yes	Connect cooling supply hose to XVT19647B-CC, for 'B' Charging pump (AB-400)	Cooling supply hose connected to XVT19647B-CC, CHG PP B OIL CLR ALT CLG WTR SUPPLY VLV, (AB-400)

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 6	STEP STANDARD:
Yes	Yes	Connect cooling supply hose to XVT18783-DN, Demin WTR Washdown VLV	Cooling supply hose connected to XVT18783-DN, AB DEMINERALIZED WATER WASHDOWN VALVE, (AB-388 at bottom of ladder to 400' level).

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 7	STEP STANDARD:
No	Yes	Connect Drain Hose between CHG/SI pump return valve and floordrain (AB-400)	Drain hose connected to XVT19648B-CC, CHG PP B OIL CLR ALT CLG WTR RETURN VLV, and directed to a floor drain.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 8	STEP STANDARD:
No	Yes	Check XVG09657B-CC (AB-400) valve position and record AS FOUND on attachment.	Removes the locking device attempts to turn XVG0965BA-CC in the clockwise direction and records valve position on the attachment.

CUES:

SAT

UNSAT

The following steps pertain to completing valve lineup on Attachment 2B of AOP-118.1. Cue examinee that XVG09657B-CC turns freely in the clockwise direction.

COMMENTS:

CR	SEQ	STEP: 9	STEP STANDARD:
Yes	Yes	Close XVG09657B-CC.	Closes XVG09657B-CC, CHG PP B OIL CLR CCW INLET VLV by rotating the valve handwheel fully in the clockwise direction.

CUES:

SAT

UNSAT

COMMENTS:

CR	SEQ	STEP: 10	STEP STANDARD:
No	Yes	Check XVT19647B-CC (AB-400) valve position and record AS FOUND on attachment.	Attempts to turn XVT19647B-CC in the clockwise direction and records valve position on the attachment.

CUES: ***SAT***

Cue examinee that XVT19647B-CC does not move in the clockwise direction. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 11	STEP STANDARD:
Yes	Yes	Open XVT19647B-CC.	Opens XVT19647B-CC, CHG PP B OIL CLR ALT CLG WTR SUPPLY VLV, by rotating the valve handwheel fully in the counter-clockwise direction.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 12	STEP STANDARD:
No	Yes	Check XVT09685B-CC (AB-400) valve position and record AS FOUND on attachment.	Removes the locking device and attempts to turn XVT09685B-CC in the clockwise direction.

CUES: ***SAT***

Cue examinee that XVT09685B-CC turns freely in the clockwise direction. Student may choose to determine throttled position of the valve. 3.75 turns open. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 13	STEP STANDARD:
Yes	Yes	Close XVT09685B-CC.	Closes XVT09685B-CC, CHG PP B OIL CLR CCW OUTLET VALVE, by rotating the valve handwheel fully in the clockwise direction.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 14	STEP STANDARD:
No	Yes	Check XVT19648B-CC (AB-400) valve position and record AS FOUND on attachment.	Attempts to turn XVT19648B-CC in the clockwise direction.

CUES: ***SAT***

Cue examinee that XVT19648B-CC does not move in the clockwise direction. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 15	STEP STANDARD:
Yes	Yes	Open XVT19648B-CC.	Opens XVT19648B-CC, CHG PP B OIL CLR ALT CLG WTR RETURN VLV, by rotating the valve handwheel in the fully counter-clockwise direction.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 16	STEP STANDARD:
No	Yes	Check XVT09530B-CC (AB-388) valve position and record AS FOUND on attachment.	Removes the locking device and attempts to turn XVT09530B-CC in the clockwise direction.

CUES: ***SAT***

Cue examinee that XVT09530B-CC turns freely in the clockwise direction. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 17	STEP STANDARD:
Yes	Yes	Close XVT09530B-CC.	Closes XVT09530B-CC, CCW SPLY TO CHG PP B OIL CLR BYP VALVE, by rotating the valve handwheel in the fully clockwise direction.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 18	STEP STANDARD:
No	Yes	Check XVT19654B-CC (AB-388) valve position and record on attachment.	Removes the locking device and attempts to turn XVT19654B-CC in the clockwise direction.

CUES: ***SAT***

Valve is in a contaminated area, but the valve can be simulated checked without entering contaminated areaCue examinee that XVT19654B-CC turns freely in the clockwise direction. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 19	STEP STANDARD:
Yes	Yes	Open XVT19654B-CC.	Opens XVT19654B-CC, CHG/SI PUMP A OIL CLR CLG WTR INLET VLV, by rotating the valve handwheel in the fully counter-clockwise direction.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 20	STEP STANDARD:
No	Yes	Check XVT19655B-CC (AB-388) valve position and record AS FOUND on attachment.	Removes the locking device and attempts to turn XVT19655B-CC in the clockwise direction.

CUES: ***SAT***

UNSAT

***Valve is in a contaminate area, but the valve can be simulated checked without entering the contaminate area.Cue examinee that XVT19655B-CC turns freely in the clockwise direction. Student may choose to determine AS FOUND throttled position. 1.0 turns open.

COMMENTS:

CR	SEQ	STEP: 21	STEP STANDARD:
Yes	Yes	Open XVT19655A-CC.	Opens XVT19655A-CC, CHG/SI PUMP A GB OIL CLR CLG WTR IN VLV, by rotating the valve handwheel fully in the counter-clockwise direction.

CUES: ***SAT***

UNSAT

COMMENTS:

CR	SEQ	STEP: 22	STEP STANDARD:
No	Yes	Check XVT18783-DN (AB-388) valve position and record AS FOUND on attachment.	Attempts to turn XVT18783-DN in the clockwise direction.

CUES: ***SAT***

Cue examinee that XVT18783B-DN does not move in the clockwise direction. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 23	STEP STANDARD:
No	Yes	Verify flow from the alternate cooling drain hose	Observes water flowing from XVT19648B-CC, CHG PP B OIL CLR ALT CLG WTR RETURN VLV.

CUES: ***SAT***

Cue operator that clear water is flowing from XVT19648B-CC if previous steps to align system were performed per the performance standards. ***UNSAT***

COMMENTS:

CR	SEQ	STEP: 24	STEP STANDARD:
Yes	Yes	Open XVT18783-DN.	Opens XVT18783-DN, AB DEMINERALIZED WATER WASHDOWN VALVE, by rotating the valve handwheel fully in the counter-clockwise direction.

CUES: ***SAT***

UNSAT

COMMENTS:

Examiner ends JPM at this point.

JPM QUESTIONS

JPM NO: JPPF-NRC

DESCRIPTION: ESTABLISH DEMINERALIZED WATER ALTERNATE COOLING TO CHARGING PUMPS (FAILURE OF CHILLED WATER SUPPLY).

IC SET:

INSTRUCTIONS:

COMMENTS: